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COSTS and RETURNS



**Commercial
Wheat
Farms**

**Pacific Northwest
Northern Plains
Southern Plains**

1965

FARM COSTS STUDIES

This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches by type and size in some of the important farming regions of the United States. The study is conducted under the general supervision of Wylie D. Goodsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas covered in the study.

The 1965 costs and returns studies have been conducted on the following:

- Dairy Farms, Northeast and Midwest
- Corn Belt Farms
- Egg-Producing Farms, New Jersey
- Broiler Farms, Maine, Delmarva, and Georgia
- Cotton Farms
- Tobacco Farms, Coastal Plain, North Carolina
- Tobacco-Livestock Farms, Bluegrass Area, Kentucky
- Wheat Farms, Plains and Pacific Northwest
- Western Livestock Ranches

Summary statistics for all types of farms in the study are presented in a report, revised annually. The latest such report was published in 1965 and is titled: "Farm Costs and Returns, Commercial Farms, by Type, Size, and Location," Agriculture Information Bulletin No. 230, Revised 1965.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

COSTS AND RETURNS COMMERCIAL WHEAT FARMS, PACIFIC NORTHWEST, NORTHERN PLAINS, AND SOUTHERN PLAINS 1965

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Costs and returns for 1964 and 1965 on representative farms in 3 western wheat-producing areas in the United States are presented in this report (fig. 1). In 1965, incomes on these farms varied from \$9,770 on wheat-fallow farms in the Northern Plains to \$18,268 on wheat-pea farms in the Pacific Northwest. Incomes in 1965 varied from 1 percent higher than in 1964 on wheat-fallow farms in the Pacific Northwest to 69 percent higher on the wheat-corn-livestock farms in the Northern Plains. Net farm incomes in 1964 and 1965 were as follows:

	<u>1964</u>	<u>1965</u>	<u>Percentage change</u>
Pacific Northwest:			
Wheat-fallow farms	\$13,863	\$13,982	1
Wheat-pea farms	14,635	18,268	25
Northern Plains:			
Wheat-fallow farms	8,166	9,770	20
Wheat-small grain-livestock farms	8,263	9,852	19
Wheat-corn-livestock farms	6,273	10,571	69
Southern Plains:			
Wheat farms	8,363	9,938	19
Wheat-grain sorghum farms	7,925	12,138	53

Prices received for wheat in 1965 tended to be a little lower than in 1964, but substantially lower than in 1963. Barley prices in most western wheat areas have increased since 1959. Prices received for corn and oats have remained fairly constant since 1959. Grain sorghum in the Southern Plains averaged \$0.97 per bushel in 1961-65 and \$0.78 per bushel in 1959 and 1960. Prices received for steers and heifers on these wheat farms were about 10 percent higher in 1965 than in 1964 but were generally below the prices received since 1958.

The acreage used for oats on these wheat farms, with the exception of those in the Northern Plains, has tended to decline. The enterprise has been discontinued on 3 of the wheat farms--wheat-fallow in the Pacific Northwest and the 2 types of wheat farms in the Southern Plains.

The crop yield index on all farms with the exception of the wheat-fallow farms in the Pacific Northwest was higher in 1965 than in 1964. On a few of the farms the yield index was record-high. Gross payments to farmers for participating in Government programs were generally higher in 1965 than in 1964 and payments in 1964 averaged substantially higher than in 1963.

LOCATION OF TYPES OF FARMS STUDIED

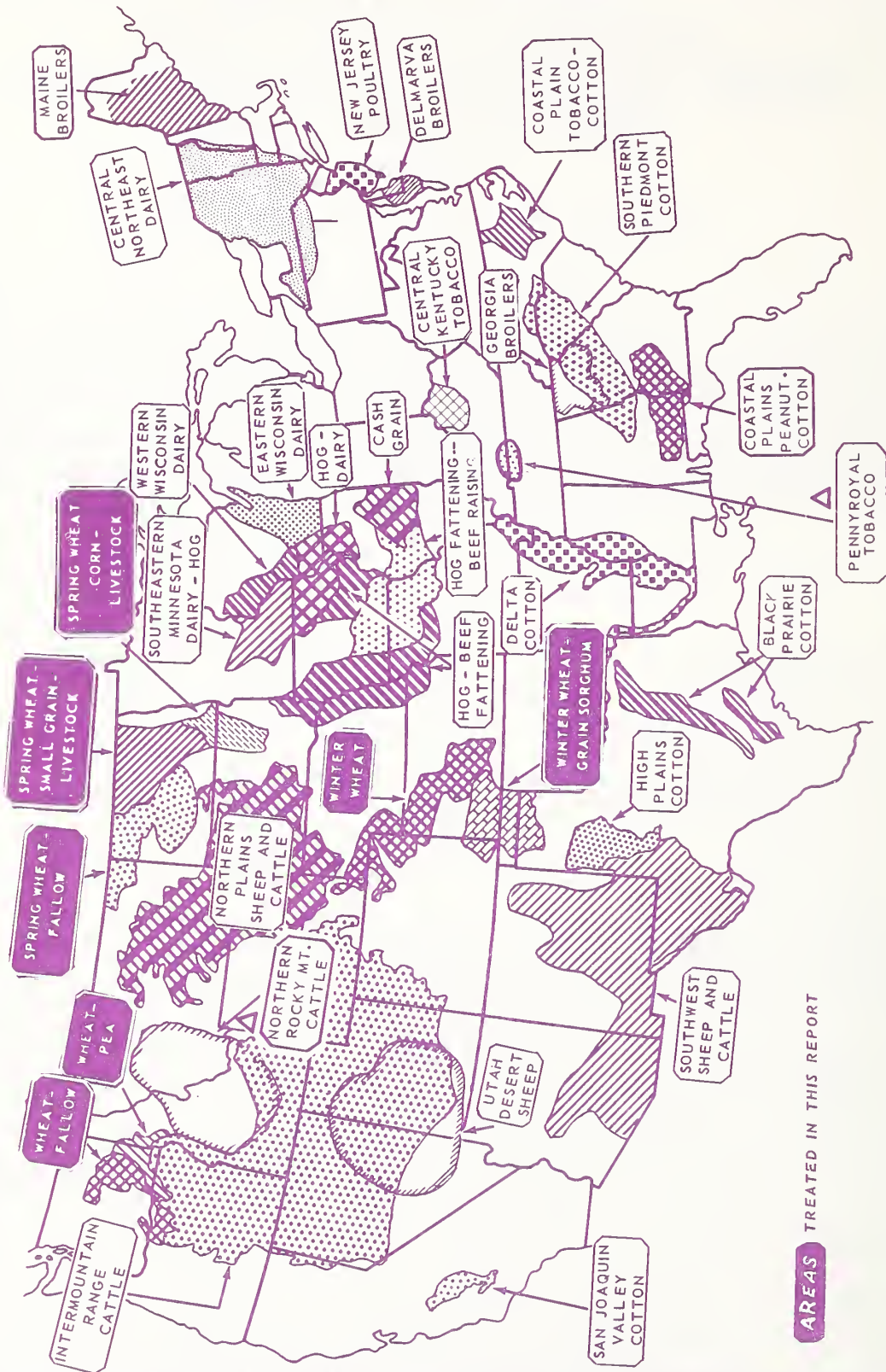


Figure 1

PACIFIC NORTHWEST

Wheat-Fallow Farms

Net farm incomes on wheat-fallow farms in the Pacific Northwest were about the same in 1965 as in 1964 but were about 11 percent lower than in 1957-59 (table 1). Production was about 2 percent lower in 1965 than in 1964 but about 2 percent higher than in 1957-59. Crops constituted 86 percent of total production on these farms in 1965 and in 1964 and 87 percent in 1957-59. Livestock production is a minor but steady source of income on these farms. Since 1957-59 there has been some decline in the acreage harvested per farm despite an increase in the average farm size. In 1957-59, 35 percent of the farm area was harvested while in 1964 and 1965 only 31 percent was harvested. The decline in the acreage harvested has been more than offset by an increase in production per acre.

Wheat is by far the most important crop on these farms. In 1957, wheat comprised 60 percent of the harvested acreage. Since 1957 the proportion of the harvested acreage in wheat has tended to increase. In 1964 it amounted to 70 percent of the harvested acreage and in 1965 the proportion reached 83 percent. Wheat owes its preeminence in this area to its higher value per acre compared to other crops. Even from the standpoint of livestock feed, more digestible nutrients per acre can normally be produced with wheat than with other crops. The 10-year average wheat yield per acre (1956-65) on these farms was 1,829 pounds. The corresponding yield of barley was 1,675 pounds and the 9-year average (1956-64) of oats was 1,131 pounds. Wheat, in addition to yielding more pounds per acre than barley, also has slightly more digestible

nutrients per pound and a higher percentage of protein. For these reasons it is likely that these farmers will continue to raise wheat even though the price declines to the level of feed grain prices. Oats has never been an important crop on these farms. Farmers harvested less than 2 acres of oats per farm in 1964 and practically none in 1965. Most of the barley is planted in the spring but recently some winter barley has been grown. In 1965 the average acreage of winter barley harvested per farm was 6 acres and spring barley was 41 acres. Winter barley yielded 47 bushels per acre and spring barley 40 bushels. Should these farmers succeed in growing winter barley without excessive winter killing it is likely that it will become an important crop on these farms.

The years 1957-59 were unusually good crop years and were the best 3 consecutive years for crop yields since 1930. There have been only 2 years since 1930 when the index of crop yields exceeded 100 (1957-59 = 100). In 1957 the index was 103 and in 1962, 105. In 1965 the yield index fell to 87. However, value of production per harvested acre held up very well in 1965 due to the shift to higher valued crops.

Prices received for commodities sold in 1965 were practically the same as in 1964. In both years the price index was 79 (1957-59 = 100). Additional payments for participation in Government programs in 1964 and 1965 tended to compensate for these low prices. In 1965 Government payments on these farms were about 20 percent higher than in 1964 and 370 percent higher than in 1963.

Net farm income per dollar of gross income amounted to 56 cents

Table 1.--Organization, production, costs and returns, wheat farms, Pacific Northwest, 1964 and 1965

Item	Unit	Wheat-fallow farms		Wheat-pea farms	
		1964	1965 ¹	1964	1965 ¹
Gross farm income.....	Dollar	24,813	25,359	27,994	31,781
Total operating expenses.....	do.	10,950	11,377	13,359	13,513
Net farm income.....	do.	13,863	13,982	14,635	18,268
Total land in farm.....	Acre	1,460	1,490	605	610
Total cropland.....	do.	1,066	1,088	551	555
Cropland harvested.....	do.	453	459	370	388
Wheat.....	do.	319	382	176	193
Other small grains.....	do.	119	58	60	.92
Hay.....	do.	15	19	22	25
Peas.....	do.	---	---	112	78
Inventory value, Jan. 1:					
Land value, per acre.....	Dollar	95	100	306	306
Machinery and equipment.....	do.	20,240	20,380	23,620	24,080
All cattle and calves.....	Number	36.0	36.3	17.3	19.5
Crop yields per harvested acre:					
Wheat.....	Bushel	33.4	29.5	60.2	61.1
Barley.....	Cwt.	18.0	21.5	27.0	24.6
Peas.....	do.	---	---	16.70	18.10
Prices received for products sold:					
Wheat, per bushel.....	Dollar	1.36	1.35	1.26	1.27
Barley, per ton.....	do.	40.00	43.74	40.00	43.74
Peas, per cwt.....	do.	---	---	3.75	4.17
Steers and heifers, per cwt.....	do.	20.10	21.60	19.65	21.55
Index numbers (1957-59=100):					
Crop yields per acre.....	---	100	87	129	130
Prices received for products sold.....	---	79	79	82	86
Prices paid, including wages to hired labor.....	---	108	110	107	109

¹ Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

in 1965 and 55 cents in 1964. Farm expenses were about 4 percent higher in 1965 than in 1964. Total farm inputs were up almost 3 percent and prices paid for goods and services used in production were up almost 2 percent.

The value of farm capital continues to increase largely as the result of rising land values. The value of this capital was estimated at \$174,650 per farm, up 6 percent from 1964. Land values were estimated at \$100 per acre as compared with \$95 in 1964. The net farm income per dollar of farm capital fell from 8.4 cents in 1964 to 8.0 cents in 1965.

Wheat-Pea Farms

Net incomes on wheat-pea farms in 1965 averaged 25 percent higher than in 1964 and 36 percent higher than in 1957-59. This increase has been accompanied by an increase in the size of farm and in the value of farm capital. Wheat-pea farms of

median size have an average investment in real estate and other capital currently valued at \$214,010. This value, because of the increase in farm size and the increase in prices, is 26 percent larger than in 1957-59. Many wheat-pea farmers have little equity in their farms. Less than 20 percent of the acreage in this area is operated by full-owners and usually there is a mortgage on land owned by the farmer. Therefore, rents and interest payments absorb a large part of the net farm income.

Wheat-pea farmers had some of their best income years in 1941-49. Net farm incomes have tended to increase since then, but at a slower rate than the increase in the size of business and at a slower rate than the increase in the value of farm property. Occasionally an exceptionally good year comes along like 1965 when the rate of return is higher than usual, as shown by the following tabulation:

Year	Net income		
	Total	Per dollar of gross income	Per dollar value of capital
	-----Dollars-----		
1935-40	2,438	0.45	0.080
1941-49	11,691	.69	.176
1950-56	13,220	.60	.101
1957-59	13,457	.57	.079
1960-63	14,359	.54	.075
1964.	14,635	.52	.069
1965.	18,268	.57	.085

In 1965 farm production on these farms was at an all-time high. This was the result of record-breaking yields. The acreage harvested was not unusually high. Although the harvested area per farm in 1965 was a little larger than in 1964, it was lower than in the 3 years

prior to 1964. Farm size also averaged larger in 1965.

Crop yields have been increasing in the wheat-pea area and were record-high in 1965--slightly higher than in 1964 and 130 percent of 1957-59. Winter wheat averaged 61.2

bushels per acre, a record high, and practically all the wheat harvested was winter wheat. In 1965, peas averaged 1,810 pounds per acre, also a record high, 8 percent above the previous record set in 1964. Barley yields were lower, especially winter barley, which was down from 62 bushels to 35 bushels per acre. However, the acreage in winter barley was relatively small. The yield of oats was estimated at 70 bushels per acre, compared with 79.5 bushels, the record set in 1964. The yield of hay (1.8 tons per acre) was not especially outstanding.

The price index for commodities sold (1957-59 = 100) increased from

82 in 1964 to 86 in 1965. Peas sold for \$4.17 per hundredweight in 1965 compared with \$3.75 in 1964. Barley moved up from \$40 a ton in 1964 to \$43.74 in 1965. The prices received for wheat, oats and hay were about the same to a little higher in 1965. The prices received for cows, steers, heifers, and hogs were considerably higher in 1965.

The larger crop in 1965 was produced with practically no change in farm inputs. There was a slight increase in prices paid for goods and services used in production and a slight increase in operating expenses.

NORTHERN PLAINS

Spring Wheat-Fallow Farms

Net farm incomes per farm on commercial farms in the spring wheat-fallow area of the Northern Plains were about 20 percent higher than in 1964 (table 2). Incomes in 1965 were the second highest of record, being exceeded by 1962 when an income of \$11,379 was recorded.

The larger income in 1965 compared with 1964 was due primarily to increased crop yields as most other factors remained about the same.

Durum wheat and other spring wheat in this area compete for the same ground. The variations between years in the average yields and average prices for the 2 crops tend to be alike. However, the trends in these factors have changed since 1950. From 1950 to 1957 the average yield of durum wheat, with the exception of 1951, was smaller than the yield of other spring wheat. From 1958 to 1965, durum wheat out-yielded other spring wheat.

From 1950 to 1963 the price of durum wheat was about the same or substantially higher than the price of other wheat. In 1963, the price of durum wheat fell below other spring wheat and since then the difference has increased. The per acre value of durum wheat (yield per acre times price) from 1950 to 1957 averaged below the per acre value of other spring wheat. For the 8 consecutive years 1958 through 1965, the per acre value of durum wheat exceeded the acre value of other spring wheat. Under these circumstances the acreage of durum wheat has been increasing relative to other spring wheat. From 1950 to 1959, durum wheat varied between 2 and 13 percent of the harvested wheat acreage; from 1960 to 1965, between 16 and 30 percent.

In 1965 durum wheat yielded 33.5 bushels per acre. This was practically the same as the 1962 record-high. In 1965 other spring wheat yielded 26.7 bushels. This was down a little from the 1962 record but

Table 2.- Organization, production, costs and returns, wheat farms, Northern Plains, 1964 and 1965

Item	Unit	Wheat-fallow farms		Wheat-small grain-livestock farms		Wheat-corn-livestock farms ¹	
		1964	1965 ²	1964	1965 ²	1964	1965 ³
Gross farm income.....	Dollar do.	13,802	15,668	14,506	16,071	12,051	16,726
Total operating expenses.....		5,636	5,898	6,243	6,219	5,778	6,155
Net farm income.....	do.	8,166	9,770	8,263	9,852	6,273	10,571
Total land in farm.....	Acre	874	893	750	760	545	550
All cattle and calves.....	Number	29.3	34.8	30.1	32.2	63.5	66.4
Total farm capital, Jan. 1.....	Dollar	65,670	70,430	60,540	63,660	64,430	65,790
Land and buildings.....	do.	50,080	54,090	43,100	46,010	42,510	44,000
Machinery and equipment.....	do.	9,890	10,390	11,270	11,700	9,170	9,600
Livestock.....	do.	4,190	4,120	4,310	3,870	9,160	8,580
Crops.....	do.	1,510	1,830	1,860	2,080	3,590	3,610
Cropland harvested.....	Acre	356	356	401	413	317	322
All wheat.....	do.	177	194	148	156	35	34
Corn.....	do.	5	4	12	16	44	47
Flax.....	do.	16	20	54	46	50	49
Other small grains.....	do.	106	90	131	114	79	82
Crop yields per acre:							
All wheat.....	Bushel	27	28	27	26	14	20
Corn.....	do.	---	---	---	---	26	36
Flax.....	do.	11	14	10	12	8	14
Barley.....	do.	34	42	36	38	24	42
Prices received for products sold:							
Wheat, per bushel.....	Dollar	1.37	1.36	141	1.38	1.42	1.38
Flax, per bushel.....	do.	2.68	2.65	2.82	2.80	2.82	2.85
Steers and heifers, per cwt.	do.	19.40	21.30	19.40	21.30	20.30	22.20
Index numbers (1957-59=100):							
Crop yields per acre.....	---	179	197	162	164	95	147
Prices received for products sold.....	---	83	83	81	84	96	103
Prices paid, including wages to hired labor.....	---	110	111	106	107	111	109

¹ Revised. ² Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

somewhat above 1964. In 1965 flax yields of 13.6 bushels and oat yields of 55.0 bushels were record highs, while the yields of rye, barley and hay were near-record highs.

The acreage harvested per farm remained unchanged in 1965 from 1964 but, because of the larger yields, crop production was about 12 percent higher in 1965. Livestock production was about 11 percent larger and comprised about 15 percent of total production in 1965 and 1964.

The dairy and poultry enterprises have tended to decline since 1950. The poultry enterprise is found on relatively few commercial farms in this area. The hog enterprise is unimportant on these farms as only about 1 farmer in 10 keeps a brood sow. The beef cattle enterprise has tended to expand since 1950. In 1965 these farmers had about 15 beef cows 2 years old and older per farm.

The index of prices received for products sold was 83 (1957-59 = 100) in both 1964 and 1965. However, livestock prices were higher in 1965 than in 1964.

The total goods and services used in producing the 1965 crop was about 4 percent larger than in 1964. Prices paid for these items averaged about the same both years.

The value of farm capital has tended to increase with the increase in the size of farm and the increase in per acre land values. Since 1950 the value of farm capital has increased each year except in 1954 when livestock values declined. In 1965, farm capital was valued at \$70,430 per farm. This is nearly 3 times larger than in 1950. From 1950 to 1965 the size of farm increased by nearly 50 percent and

the value of capital per acre of land doubled. In 1950 real estate values comprised 65 percent of the value of all capital compared with 77 percent in 1965. In 1950 farmland was valued at \$25 per acre and in 1965 at \$60.

Wheat-Small Grain-Livestock Farms

Net farm incomes in the wheat-small grain-livestock area were 19 percent higher in 1965 than in 1964 (table 2). This increase is largely the result of increased production and higher prices for products sold. Production in 1965 was about 7 percent higher and prices received averaged 4 percent higher than in 1964. Farm expenses were about the same both years. The index of prices paid was less than 1 percent higher in 1965 than in 1964.

The index of all livestock prices averaged 8 percent higher in 1965 than in 1964 and the index of all crop prices averaged 4 percent higher. Crop prices were unusually low in both 1964 and 1965 but were offset at least in part by higher payments for participation in Government programs. In 1965 livestock production increased at a little faster rate than crop production. Cattle sales accounted for about 69 percent of the income from livestock and livestock products in 1964 and 71 percent in 1965. The index of cattle prices was about the same in 1965 as in 1957-59 but 6 percent higher than in 1964.

The number of beef cows per farm has increased a little each year since 1949 as the size of farm has increased and the number of milk cows has decreased. In 1949 these farms averaged 5.9 milk cows and 3.1 beef cows. In 1955 the number of milk cows had increased to 6.2 head per farm and the number

of beef cattle to 6.5. Since then the number of milk cows per farm has continued to decline while the number of beef cows has increased. By January 1, 1966 the number of milk cows had declined to 2.9 head per farm and the number of beef cows had increased to 12.8 head.

Hogs ordinarily are not very important on these farms. From 1962 to 1966 about half of the farmers kept a brood sow. These farmers could have, if economic conditions had permitted, raised many more hogs per farm. In 1943, when the average farm was only 72 percent of its present size, these farmers averaged 3.1 brood sows per farm.

The number of chickens per farm has been declining. The poultry enterprise attained its maximum importance in the early forties. In 1942 these farmers raised about 160 chickens per farm and had 95 layers. In 1965 they raised less than 50 chickens per farm and had about 40 layers.

Crop production in 1965 was about 6 percent higher than in 1964. This was the result of a 3 percent increase in harvested acres and a slight increase in the yields per acre. Crop yields in 1965 were the second highest of record, being exceeded 15 percent by the record high in 1962.

The value of farm capital continues to increase on these farms. In 1965 the value of this capital was 5 percent greater than in 1964 and 37 percent greater than in 1957-59. Despite this increase, net farm income per dollar of capital was higher in 1964 and 1965 than in 1957-59. The net farm income per dollar of capital averaged 9.5 cents in 1957-59, 14 cents in 1964, and 15 cents in 1965. However, 1964 and 1965 were exceptionally good years. In

1961, a year of near crop failures, net farm income per dollar of capital fell to one-half cent.

About two-thirds of the value of farm capital consists of real estate. In 1957 real estate values amounted to 65 percent of all farm capital. This proportion has gradually increased and in 1965 was 72 percent. Farm machinery has been increasing in value at a slower rate and amounted to 23.9 percent of all capital in 1957 and 18.4 percent in 1965. Livestock and crops together constitute about 10 percent of all capital. The proportion of the capital represented by these 2 factors has not changed materially since 1957.

For the purposes of this analysis, the value of farm capital is estimated on the basis of current prices. However, most items of capital on these farms have been acquired by their present owners at substantially lower prices. This is particularly true of land and to a lesser extent of machinery. The cost to the farmer for items of capital consisting of farm-produced livestock and crops may be lower than market costs.

Both machinery prices and land values have been increasing but land values have been increasing on these farms at a much faster rate since 1950 than has machinery prices. In 1950 the index of machinery prices (1957-59=100) was 78 and land values 67. By 1965 the machinery index had increased to 119 and the land value index had increased to 138. In 15 years machinery prices have increased 1.5 times while land values have doubled.

Wheat-Corn-Livestock Farms

Net farm income in 1965 on commercial farms in the wheat-corn-livestock area averaged 69 percent

more than in 1964 (table 2) and 81 percent higher than in 1957-59. Most of this additional income was the result of an increase in net farm production, which was 29 percent higher in 1965 than in 1964 and 40 percent higher than in 1957-59. In 1965 the index of prices received for products sold was 7 percent higher than in 1964 and 3 percent higher than in 1957-59, whereas the index of prices paid for goods and services used in production was 2 percent lower than in 1964 but was 9 percent higher than in 1957-59. The additional production in 1965 was brought about in part by an increase in the size of farm and an increase in other inputs. The index of total inputs in 1965 was 5 percent larger than in 1964 and 10 percent larger than in 1957-59. Increase in efficiency was another reason for the large production in 1965. The index of output per unit of input in 1965 was 24 percent larger than in 1964 and 29 percent larger than in 1957-59.

These farms are highly diversified. Crop sales comprised about 39 percent of the gross income in 1957-59, 19 percent in 1964, and 35 percent in 1965. The income from livestock and livestock products amounted to 53 percent of gross income in 1957-59, 67 percent in 1964, and 53 percent in 1965. Other sources of income consist of miscellaneous items and payments for participating in Government programs. A major part of the changes in annual income on these farms is the result of variation in crop yields. A large crop tends to increase crop sales relative to livestock sales in the year when produced and to increase livestock sales relative to crop sales the following year. Short crops have the opposite effect.

The poor crop of 1964 reduced crop sales and resulted in some

liquidation and culling of livestock which tended to increase livestock income relative to crop income. The short hay and corn crop of 1964 also led to some reduction of livestock production in the following year, while the larger crop in 1965 increased crop sales.

The relative importance of the various enterprises is affected not only by yields and prices but also by the effect of various Government programs. These programs affect the distribution of income through allotments, diversion payments, price support payments, and soil conservation payments. These programs have released land from wheat production and by this means increased the incomes derived from other enterprises. The distribution of gross income by enterprises is as follows:

Enterprise	Average income per farm		
	1957-59	1964	1965
	-----Dollars-----		
Wheat.....	1,693	655	948
Flax.....	723	1,046	1,927
Rye.....	183	107	249
Oats and barley...	1,105	481	1,414
Corn for grain....	554	61	1,051
Roughage (inventory change)....	-99	-2	340
Total crops.....	4,159	2,348	5,929
Cattle.....	2,916	4,128	4,680
Hogs.....	1,269	1,571	1,817
Sheep and wool...	232	252	262
Milk.....	853	1,543	1,599
Poultry and eggs..	483	523	475
Total livestock..	5,753	8,017	8,833
Other income.....	863	1,686	1,964
Total gross income	10,775	12,051	16,726

The 1959-65 average distribution of harvested acres and value per acre was as follows:

Crop	Relative acreage	Value per acre	Percentage of total value
	Percent	Dollars	Percent
Durum wheat...	2.1	32.89	2.7
Other spring wheat.....	9.2	27.85	9.8
Oats	19.8	21.11	16.0
Barley	4.6	21.15	3.7
Rye.....	1.9	19.61	1.4
Flax	15.9	27.65	16.9
Corn for grain .	15.8	32.93	19.9
All roughage...	30.7	25.12	29.6
All crops....	100.0	26.08	100.0

The gross value per acre as shown in the above tabulation is the yield per acre times its seasonal average price. The differences in these returns among the various crops reflect the differences in their cost of production and the comparative advantage of particular types of land for producing income. For example, most of the land used for producing rye, which produced a gross income of only \$19.61 per acre, probably would not produce a higher gross if used for the production of another crop. Also, the cost of producing an acre of rye is considerably less than the cost of

producing most crops grown on these farms.

The distribution of the harvested acreage, although not exactly the same from one year to the next, is remarkably uniform. This despite the very large range in the annual value per acre of each crop, as shown by the following tabulation:

Crop	Variation 1959-1965	
	Percentage of harvested acres	Range in value per acre
	Percent	Dollars
All roughage.....	28 to 35	14 to 30
Oats.....	17 to 21	11 to 31
Corn for grain.....	13 to 22	15 to 51
Flax.....	15 to 17	18 to 40
Spring wheat, other than durum.....	8 to 11	13 to 39
Barley.....	2 to 7	9 to 38
Durum wheat.....	1 to 3	14 to 49
Rye.....	1 to 3	14 to 29

When the income per acre from a given crop (yield times seasonal price) is relatively high, the acreage for that crop is likely to increase the following year. However, this relationship is not always true and the effect within the observed range appears to be small. The relationship might have been different if there had not been general participation in Government programs.

SOUTHERN PLAINS

Wheat Farms

In 1965 net farm income on wheat farms in the Southern Plains averaged 9 percent higher than in 1957-59 and 19 percent higher than in

1964 (table 3). Increased production accounted for most of this change in income. The index of production in 1965 averaged 13 percent higher than in 1957-59 and 8 percent higher than in 1964. Excellent yields in

Table 3.--Organization, production, costs and returns, wheat farms, Southern Plains, 1964 and 1965

Item	Unit	Wheat farms		Wheat-grain sorghum farms	
		1964	1965 ¹	1964	1965 ¹
Gross farm income.....	Dollar	14,754	17,532	16,523	22,143
Total operating expenses.....	do.	6,391	7,594	8,598	10,005
Net farm income.....	do.	8,363	9,938	7,925	12,138
Total land in farm.....	Acre	820	830	899	909
Total cropland.....	do.	616	625	692	700
Cropland harvested.....	do.	343	358	343	370
Wheat.....	do.	209	244	214	246
Grain sorghum.....	do.	51	38	89	90
Other grains.....	do.	28	12	6	2
Forage sorghum and hay.....	do.	43	57	34	32
Inventory value, Jan. 1:					
Land value, per acre.....	Dollar	112	120	124	125
Machinery and equipment.....	do.	11,390	11,480	10,910	10,670
All cattle and calves.....	Number	63.7	55.0	79.0	59.9
Crop yields per harvested acre:					
Wheat.....	Bushel	20.0	21.2	15.5	23.9
Grain sorghum.....	Cwt.	13.0	16.7	19.4	29.7
Forage sorghum.....	Ton	2.0	3.6	1.9	2.9
Prices received for products sold:					
Wheat, per bushel.....	Dollar	1.37	1.32	1.38	1.32
Grain sorghum, per cwt.....	do.	1.86	1.71	1.89	1.71
Steers and heifers, per cwt.....	do.	19.20	21.50	19.20	21.50
Index numbers (1957-59 = 100):					
Crop yields per acre.....	---	90	108	80	115
Prices received for products sold.....	---	78	80	85	84
Prices paid, including wages to hired labor.....	---	113	106	106	105

¹ Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

1965 together with some increase in cropland harvested resulted in a 38 percent increase in crop production.

The feed supply in 1964 was short relative to livestock numbers. This led to a 13 percent reduction in the breeding herd in 1964 and to a reduction in the number of calves purchased. Because of this reduction in the rate of stocking, livestock production in 1965 was about 10 percent lower than in 1964. With the large crop in 1965, wheat farmers again built up cattle numbers by reducing culling rates and purchasing more calves. The number of cattle and calves on these farms as of December 31, 1965, reached a record high of 70.3 head per farm.

The income from livestock is a stable source of income on these farms (fig. 2). However, in most years the income from livestock comprises less than 50 percent of total net income. From 1950 through 1965 net livestock income averaged 38 percent of the net farm income from all sources.

Large changes in the relative prices among the livestock and crop enterprises have produced corresponding changes in the relative sources of income. For example, in 1964 the index of crop prices was 79 and that of livestock and livestock products was 74. In 1965 the index of crop prices dropped to 75 while the index of livestock prices increased to 91. Yearly changes of this magnitude in relative prices of commodities sold by these farmers have frequently occurred. The index of crop prices is heavily weighted by the price of wheat. The price of wheat in 1957-59 averaged \$1.80 per bushel compared to \$1.37 in 1964 and \$1.32 in 1965. The movement in the prices received for the sale of

grain sorghum has been quite different. In 1957-59, grain sorghum averaged \$0.92 per bushel compared to \$1.04 in 1964 and \$0.96 in 1965. Offsetting the drop in wheat prices in 1964 and 1965 was the increased payment to the farmers for participating in Government programs. The major livestock income on these farms is derived from the sale of steers and heifers. This class of beef cattle sold for \$22.60 per hundredweight in 1957-59, \$19.20 in 1964, and \$21.50 in 1965.

Gross income and farm expenses were both 19 percent higher in 1965 than in 1964. Expenses per dollar of gross income remained at 43 cents for both years. Contributing to the increased expenditures in 1965 was an outlay of \$1,206 for calves compared to \$207 in 1964. There was practically no outlay for service buildings in 1964 on these farms, but with the larger crops and increased livestock numbers in 1965 the expenditures for repairing and improving service buildings were increased substantially. It is estimated that at current prices about \$300 per year must be spent annually to keep the service buildings in repair.

Wheat-Grain Sorghum Farms

In 1965 the net farm income on wheat-grain sorghum farms was 53 percent higher than in 1964 (table 3) and 77 percent higher than in 1957-59. Among the many factors which accounted for the increased income were: (1) Larger farms and greater output, (2) stepped up efficiency in the use of inputs, and (3) participation in Government programs. Lower prices for products sold and higher prices for goods and services used in production have been offsetting factors. The increase in income

Winter Wheat Farms, Southern Plains

NET FARM INCOME



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Figure 2

has been accompanied by increasing capital requirements.

Total inputs--all factors used in production including family labor at hired wage rates, capital charges, and cash expenditures--in 1957-59 averaged \$13,718 per farm. The quantity of inputs has increased each year since 1957 until in 1963 they were 26 percent larger than in 1957-59. In 1964 they averaged 10 percent more than in 1957-59. But because of the larger crop in 1965 they increased and were 22 percent more than 1957-59.

Cash inputs have been increasing faster than other inputs and faster than the increase in the size. Cash inputs comprised 52 percent of all inputs in 1957-59, 54 percent in 1964, and 58 percent of all inputs in 1965. Measured in constant dollars (1957-59) cash inputs cost \$8.60 per acre in 1957-59, \$9.10 in 1964, and \$10.57 in 1965. The trend suggests some increase in the intensity of culture.

The charge for capital at constant prices has tended to increase at a slower rate than have cash inputs. These cash inputs were 12 percent larger in 1965 than in 1957-59.

Family labor inputs are relatively constant and because of this the percentage comprising family labor declines as the total inputs increase. In 1957-59 family labor constituted nearly 19 percent of all inputs and in 1965, almost 16 percent.

The composition of the cash inputs has changed since 1957-59. For example, in 1959 these farmers hired 52 days of hired labor per farm. In 1964 they hired 44 days, and in 1965, 41 days. The trend in the use of nitrogen fertilizer has been the opposite. In 1959 they used 3,000 pounds of elemental nitrogen,

in 1964, 4,700 pounds, and in 1965, 5,100 pounds. The decrease in hired labor and the increase in the rate of nitrogen application were inversely correlated with the changes in prices. Compared with 1957-59, wage rates were 29 percent higher in 1964 and 43 percent higher in 1965. On the other hand, cost per pound of nitrogen was 8 percent less in 1964 and 13 percent less in 1965.

In 1930 these farms averaged 520 acres per farm. The size has increased each year, and since 1957 they have increased by 9 to 10 acres a year. In 1965 they averaged about 909 acres.

The increase in the size of farm since 1957-59 has been accomplished with less than a proportional increase in the amount of machinery and equipment per farm. The amount of work accomplished with a given machine has been increasing. This effort by farmers to fully utilize their machinery is one of the reasons for the increase in farm size.

In general, livestock numbers have been increasing at a faster rate than has the size of farm. The rate of stocking as of January 1, 1964, was about 2.75 times larger than on January 1, 1957. Beef cattle is the major livestock enterprise on these farms. In 1957 cattle numbers averaged 25 head per farm. By 1964 the number had increased to 79 head. A part of this increase was made possible by the purchase of calves from adjacent range areas. In 1964 cattle numbers declined about 24 percent because of a shortage of feed. However, 1965 was a good crop year and 92 tons of hay and sorghum forage were produced per farm compared with 69 tons in 1964, and cattle numbers per farm increased about 17 percent.

Production in 1965 was 43 percent greater than a year earlier and 46 percent greater than in 1957-59. This is the result of the increase in the size of farm and production efficiency, which was 20 percent higher in 1965 than in 1957-59.

One of the major factors contributing to maintaining incomes on these farms is participation in Government programs. In 1957-59 Government payments averaged \$312 per farm, in 1964, \$4,602, and in 1965, \$4,749. However, prices of grain and cereal crops have declined and these larger payments should be considered in the light of the decrease in these prices. Prices of grains sold on these farms were

about 15 percent lower in 1965 than in 1957-59.

The prices paid for capital items--land, machinery, livestock, and seed--and quantities of these items used have been increasing. This accounts for the increase in the value of this capital per farm. In 1957-59 the value of all farm capital amounted to \$95,350 per farm. In 1965, it was \$132,160. One measure of the relative profitability of farming in a given year is indicated by the ratio of net farm income to the value of capital. In 1957-59, net farm income was 7.2 percent of the value of farm capital; in 1964, 5.9 percent; and in 1965, 9.2 percent.

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